

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions,
and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Tooling for molding with keys for
the production in particular of air intakes without clips of
substantially tubular shape, ~~characterized in that it comprises~~
said tooling comprising:

- a self-supported mandrel with keys comprising at least three sectors in the form of panels, namely at least two articulated sectors $[(S_1, S_2)]$ retractable toward the center of said mandrel and a so-called key sector $[(S_3)]$ independent from the other sectors and insertable between these latter, thereby, by abutment, to define, by their external surface, a continuous surface corresponding to the internal surface of the air intake;
- means to lock said sectors $(S_1 \text{ to } S_3)$ in abutted position;
- and a control device, disconnectable from the mandrel, ~~preferably automatic~~, for the relative displacement of the movable sectors to place them either in a molding position by abutment of the

sectors, or in an un-molding position ~~(S'1 to S'3)~~ by retraction of said sectors inwardly of the mandrel.

2. (currently amended) Tooling according to claim 1, characterized in that it comprises for molding with keys, said tooling comprising:

- a mandrel [[(1)]] with keys comprising four sectors, namely a fixed sector [[(2)]] flanked by two ~~other articulated~~ sectors [[(3)]] that are symmetrical and articulated on the fixed sector [[(2)]], and a key sector [[(5)]] independent of the ~~others~~ other sectors and insertable between the two articulated sectors; ~~(3)~~ and

means [[(6, 7)]] to lock in the sectors in abutted position, the mandrel being thus self-supporting;

- a control device ~~(29 to 35; 45 to 49)~~ for controlling the relative movement of the sectors [[(3, 5)]] to place them either in a molding position by abutment of all the sectors ~~(2, 3, 5)~~, or in an un-molding position by retraction of the three movable sectors [[(3, 5)]] inwardly of said mandrel [[(1)]], the control device being disconnectable from the mandrel and,

- means permitting the transport and the rotation of the mandrel [[(1)]] in its molding position,

constituted by two removable flanges [[(9a, 9b)]] adapted to the two ends of the mandrel, said flanges being connected by securement ties [[(10)]] and provided in their center with a socket ~~(11)~~ or the like for connection to drive means for said mandrel in rotation about its axis.

3. (currently amended) Tooling according to claim 2, characterized in that said control device for displacement of the sectors [[(3,5)]] is constituted by a structure [[(20)]] for reception of the mandrel in axially vertical position, comprising:

- first fixed means [[(24, 25)]] on which the fixed sector [[(2)]] rests,
- second movable means ~~(29 to 35)~~ on which the key sector [[(5)]] rests, these means being movable diametrically of the mandrel,
- and third and fourth movable means ~~(45 to 49)~~ for support respectively of the two articulated sectors [[(3)]], said third and fourth means each comprising a carriage [[(46)]] movable internally of the mandrel and carrying a drive means [[(49)]] on which rests one of said articulated sectors [[(3)]].

4. (currently amended) Tooling according to claim 2,
~~characterized in that wherein~~ the articulated sectors [[(3)]] and
the key sector [[(5)]] are provided with locking means [[(6, 7)]]
of said sectors in abutted position.

5. (currently amended) Tooling according to claim 4,
~~characterized in that wherein~~ said second means ~~(29 to 35)~~ carry
said control means ~~(36 to 44)~~ of said locking means [[(6, 7)]].

6. (currently amended) Tooling according to claim 5,
~~characterized in that wherein~~ the locking means are constituted
by two pairs of locks [[(19)]] for movable blocking in
translation so as to secure or release two facing portions
[[(14', 14'')]] of two adjacent sectors [[(3, 5)]] to be abutted
and in that said control means of the locking means are
constituted by a pair of articulations [[(37, 40)]] for the
control of the translation of said locks [[(19)]], each
controlled by a jack [[(43)]] carried by said post [[(36)]].

7. (currently amended) Tooling according to claim 3,
~~characterized in that wherein~~ the articulated sectors [[(3)]] and
the key sector [[(5)]] are provided with locking means [[(6, 7)]]
of said sectors in abutted position.

8. (currently amended) Tooling according to claim 7,
~~characterized in that wherein~~ said second means ~~(29 to 35)~~ carry
said control means ~~(36 to 44)~~ of said locking means [[(6, 7)]].

9. (currently amended) Tooling according to claim 8,
~~characterized in that wherein~~ the locking means are constituted
by two pairs of locks [[(19)]] for movable blocking in
translation so as to secure or release two facing portions
[[(14', 14'')]] of two adjacent sectors [[(3, 5)]] to be abutted
and in that said control means of the locking means are
constituted by a pair of articulations [[(37, 40)]] for the
control of the translation of said locks [[(19)]], each
controlled by a jack [[(43)]] carried by said post [[(36)]].

10. (new) Tooling according to claim 1, wherein said control
device is disconnectable from the mandrel at least when said
sectors are in said molding position.

11. (new) Tooling according to claim 2, wherein said control
device is disconnectable from the mandrel at least when said
sectors are in said molding position.

12. (new) Tooling according to claim 4, wherein said
mandrel, equipped with said flanges and said locking means,

constitutes a transport structure for a tubular shape molded on said mandrel.

13. (new) Tooling according to claim 4, wherein said locking means comprise a first locking element on one of said articulated sections and a second locking element on said key element that connect to each other to lock said mandrel in said molding position.

14. (new) Tooling for molding with keys for producing substantially tubular air intakes without clips, said tooling comprising:

a self-supported mandrel having at least three sectors, said at least three sectors comprising at least two articulated sectors retractable toward a center of said mandrel and a key sector that is movable independent from said at least two articulated sectors and insertable between said at least two articulated sectors, said at least three sectors abutting together in a molding position, to define, by their external surfaces, a continuous surface corresponding to an internal surface of an air intake;

locking elements to lock said sectors to each other in said molding position; and

a control device, removably connected to said mandrel for the relative displacement of said at least three sectors to

place said at least three sectors either in said molding position, or in an un-molding position by retracting said sectors inwardly of said mandrel.